

What is claimed is:

1. A wooden composite beam having a central cavity surrounded by wood or wood derivative walls and filled with a core of corrugated paper or corrugated cardboard, the core being adhered to the surrounding walls.

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2. A beam as claimed in Claim 1 wherein the beam is an I beam comprising upper and lower plywood flanges interconnected by a web comprising a pair of spaced apart planar side walls formed from wood or wood derivative material, the cavity being formed within the web.

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3. A beam as claimed in Claim 2 wherein each plywood flange extends beyond the supporting web on each side thereof by about 1/3 of its total width.

4. A beam as claimed in Claim 2 wherein the side walls are made from one of  
15 hardboard, plywood, or cardboard.

5. A beam as claimed in Claim 2, wherein the side walls are formed from a lesser thickness material than the material of the flanges.

20 6. A beam as claimed in Claim 2, wherein the core comprises a plurality of layers of corrugated paper or cardboard which are each coated in a suitable adhesive and laminated together.

25 7. A beam as claimed in Claim 6, wherein the corrugations in the different layers of the core all run in the same direction.

8. A beam as claimed in Claim 6, wherein the corrugations in adjacent layers of the core are normal to each other.
- 5 9. A beam as claimed in Claim 6, wherein the corrugations in one layer may be smaller in dimensions than the corrugations in an adjacent layer.
10. A beam as claimed in Claim 2, wherein the wood grain in the outer veneer of the plywood flanges extends longitudinally of the beam.
- 10 11. A beam as claimed in Claim 3, wherein the transverse width of the cavity within the web is between 20-35% of the width of the flanges and typically 25-35%.
12. A beam as claimed in Claim 2 and further including a plurality of dowels  
15 mounted on the web and spaced longitudinally along its length.
13. A building panel having a rectangular frame with both faces covered in board material, the frame comprising top and bottom rails which are joined together by a plurality of spaced apart wood composite "I" beams as claimed in Claim 2  
20 extending therebetween.
14. A building panel having a rectangular frame with both faces covered in board material, the frame comprising top and bottom rails which are joined together by a plurality of spaced apart wood composite beams extending therebetween, the  
25 outer beams being beams in accordance with Claim 12.